

REMARKS

In the Office Action mailed February 18, 2005, Claims 23, 24, 27-35, 37-39 and 46 have been rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by U.S. Patent No. 5,874,219 to Rava et al. ("Rava et al.") in view of U.S. Patent No. 5,556,961 to Foote et al. ("Foote et al."). The Examiner has alleged that Rava et al. disclose an apparatus comprising an array of test sites on a chip and further comprising an array of pixels of a CCD, and has acknowledged that Rava et al. "do not teach incorporating a mask between the elements or spots of the array." However, the Examiner has alleged that Foote et al. "teach explicitly of incorporating a mask into an array" and that it would have been obvious to incorporate such a mask with the apparatus of Rava et al. to allow for a matrix of discrete cells.

The rejection relies on embodiments of Rava et al. having a biological chip containing an array of probes and attached to the bottom of a microtiter well (see Rava et al. at Figs. 5 and 6 and Col. 8, l. 29-34). It is the Examiner's position that Rava et al. teach simultaneous detection of light from a plurality of predetermined regions corresponding to probes in the array within the microtiter well, and that it would have been obvious to incorporate a mask between the probes in such an array.

Even if one accepted this interpretation, there would have been no motivation to include masking means between the probes in the array. Rava et al. repeatedly teach that the biological chip is transparent (Col. 4, l. 13-15; Col. 5, l. 45; Col. 6, l. 27; Col. 8, l. 20; Col. 8, l. 63-67; Col. 9, l. 59), thereby teaching away from including a masking means.

Foote et al. do not, as the Examiner alleges, teach of "incorporating" a mask into an array. Rather, Foote et al. teach a photolithographic method for the synthesis of a microarray. In this method, a photolithographic mask is placed over a derivatized substrate, and light is caused to pass through transparent areas of the mask onto photolabile groups on the substrate. A series of blocking and illumination steps result in production of a microarray having cell areas that are reactive with a selected molecule and boundary areas that are non-reactive. As clearly shown in

Figs. 2-4 of Foote et al., the photolithographic mask does not become incorporated into the microarray.

Thus even if one used the photolithographic technique of Foote et al. to fabricate the biological chips of Rava et al., the photolithographic masks are not incorporated into the chips or the final apparatus. The combination of cited references does not provide the apparatus discovered in accordance with the claimed invention, which comprises a sample receptacle comprising an array of reaction sites and masking means between the reaction sites.

Accordingly, there would have been no motivation to combine the teachings of Rava et al. with the teachings of Foote et al. Even if, arguendo, the references were combined, the combination thereof fails to achieve the present invention. Withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

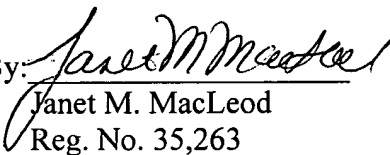
Claims 37-39 have been objected to as dependent upon a rejected base claim. In view of the foregoing comments it is respectfully submitted that the base claims are allowable, and withdrawal of the objection is respectfully requested.

Favorable reconsideration and allowance of all pending claims is earnestly solicited.

Respectfully submitted,

DORSEY & WHITNEY LLP

Date: May 18, 2005

By: 
Janet M. MacLeod
Reg. No. 35,263
250 Park Avenue
New York, NY 10177
(212) 415-9200